

Figure 1A Circular array of miniature video cameras



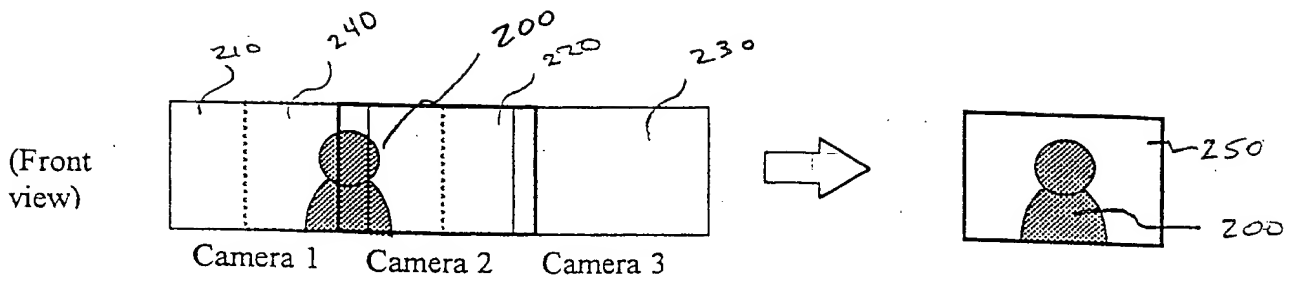


Figure 2A Composing images and extracting a "virtual camera" view

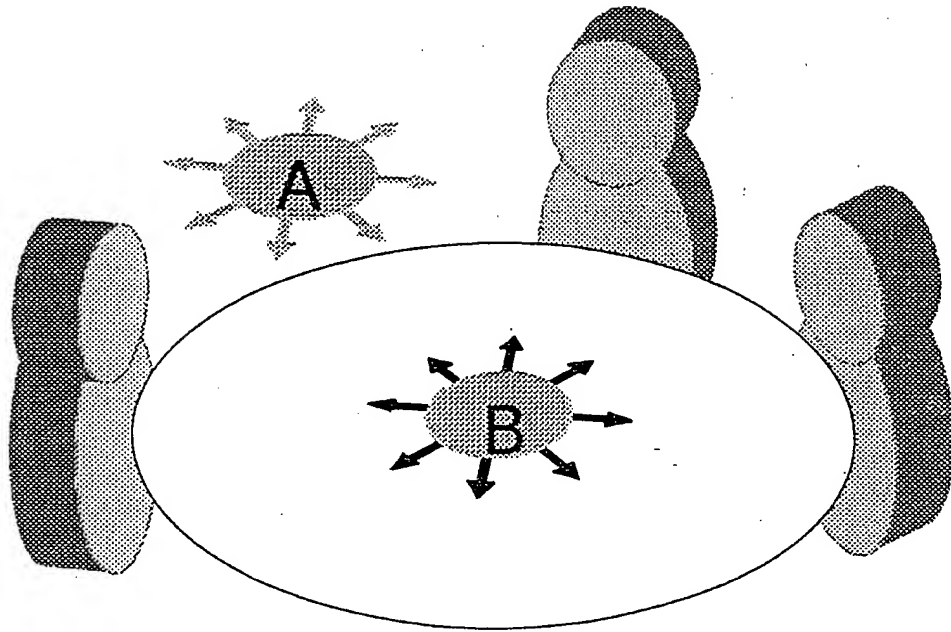
A hand-drawn schematic diagram illustrating a system architecture. The diagram includes the following components and connections:

- 260**: A rectangular block containing a 3x4 grid of small circles, representing a data source or storage.
- 262**: A large, irregular oval shape containing a diamond-shaped region with four small squares and a central circle, representing a target area or sensor field.
- 264**: A rectangular block representing a processing unit or controller.
- 266**: A radio tower with a signal emanating from the top, labeled "RND", representing a remote communication node.
- 280**: A small electronic device with a circular component on top, representing a local terminal or interface.
- 282**: A rectangular block representing a base station or gateway.
- 284**: A small rectangular device with a grid of dots, representing a mobile device or sensor.
- 286**: A computer monitor displaying a graphical interface with a central circle and surrounding text, representing a user interface or data display.

The connections between the components are as follows:

- Arrows point from **260** to **262** and from **260** to **264**.
- A line connects **264** to **266**.
- A jagged line (representing a wireless signal) connects **266** to **280**.
- A line connects **280** to **282**.
- A jagged line connects **282** to **284**.
- A line connects **282** to **286**.

Fig. 2B



*Figure 3: Circular camera array for teleconferencing applications*

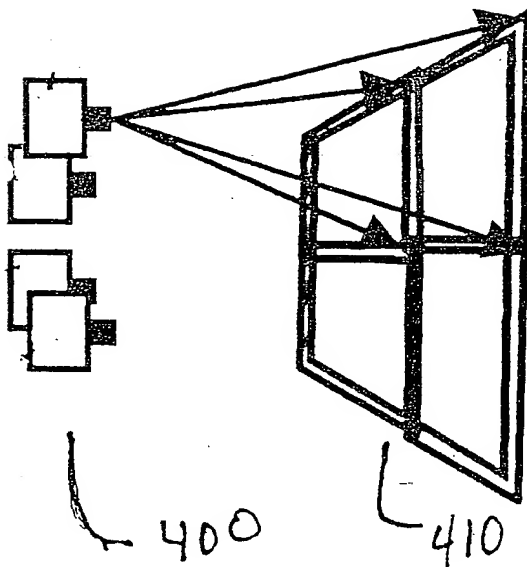


FIG. 4A

FIG. 4B.

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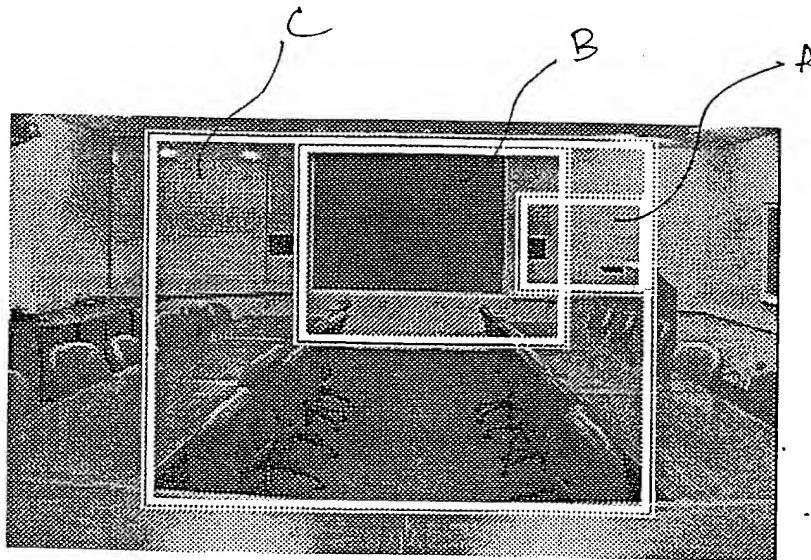


FIG 4C



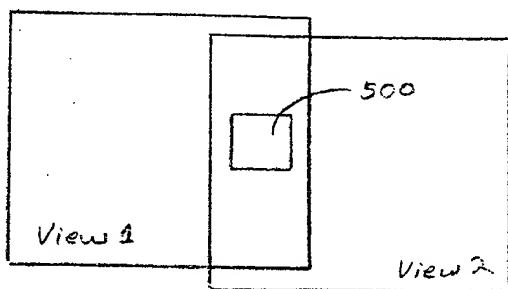


FIG. 5A

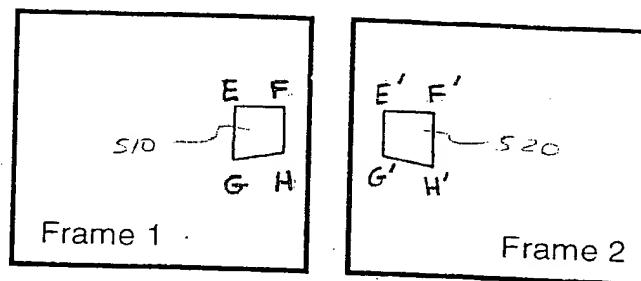


FIG. 5B

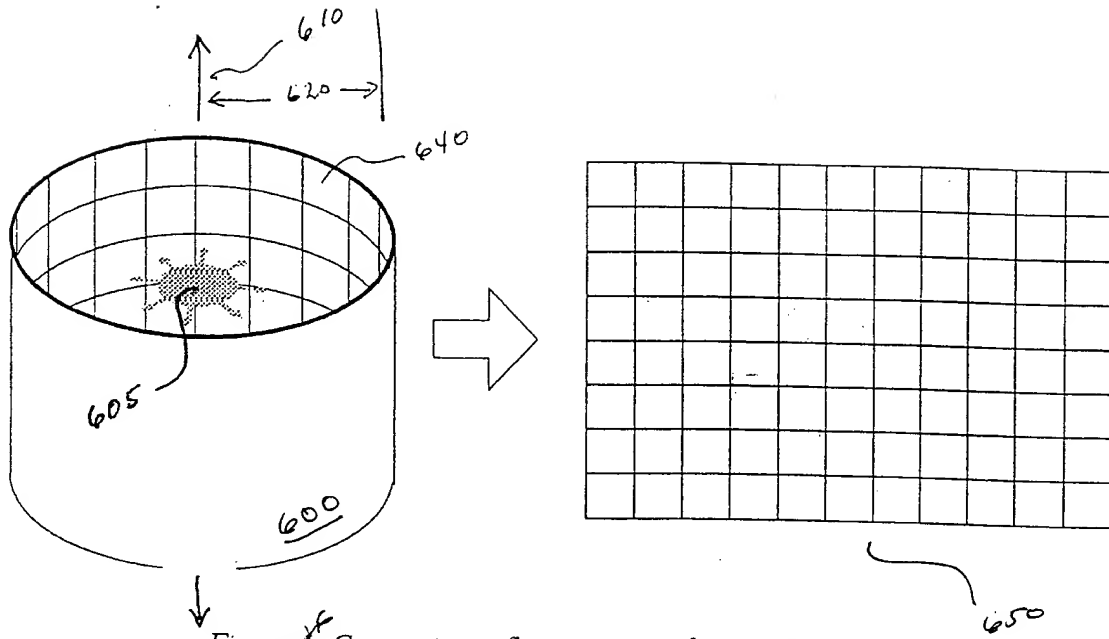


Figure 4: Generating a flat panorama from image patches





FIG. 9

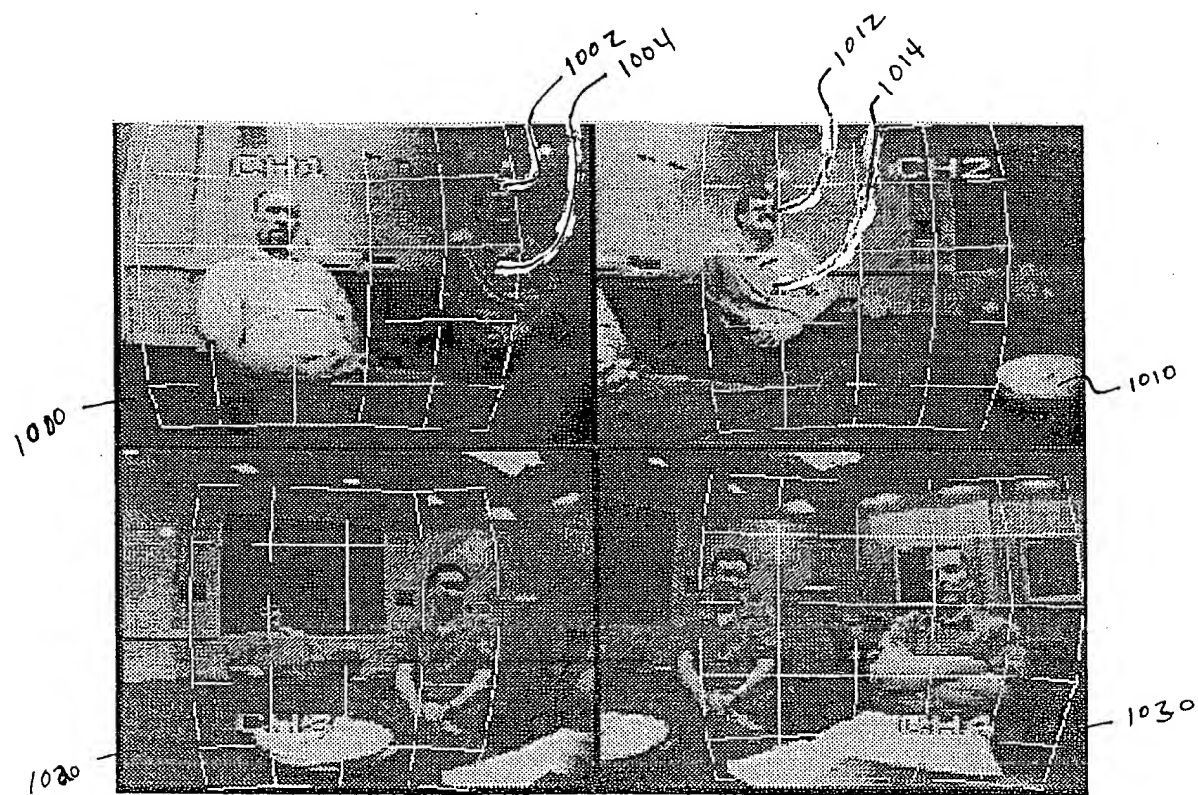
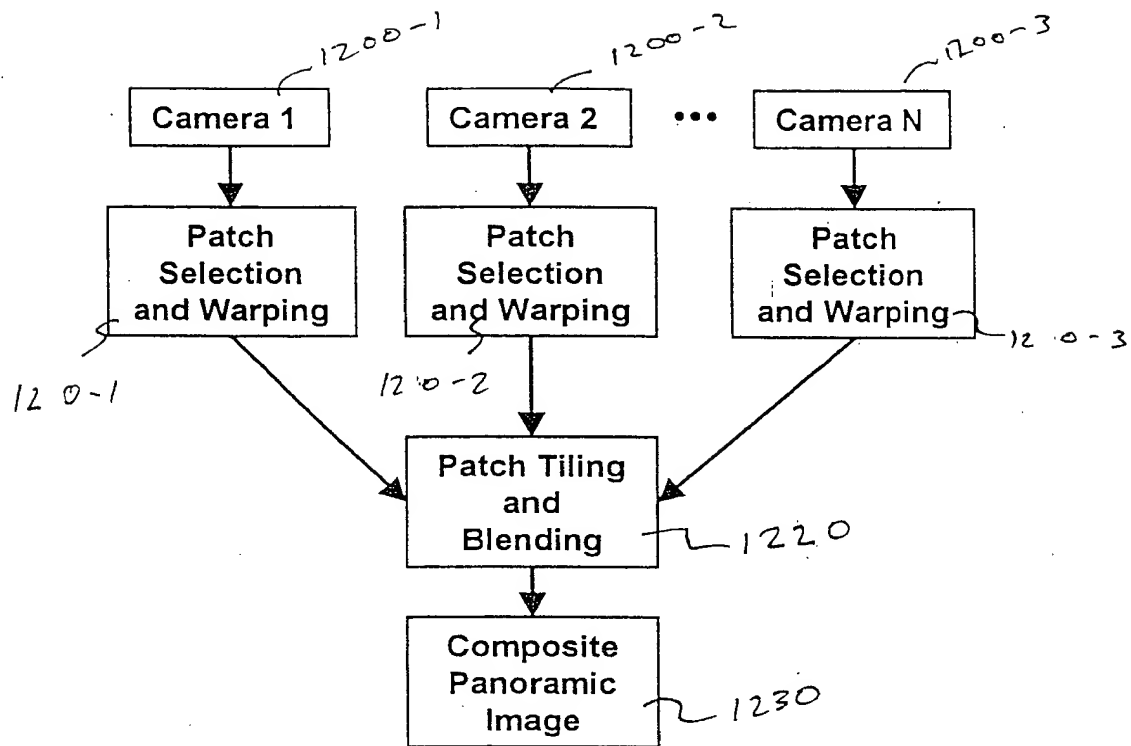


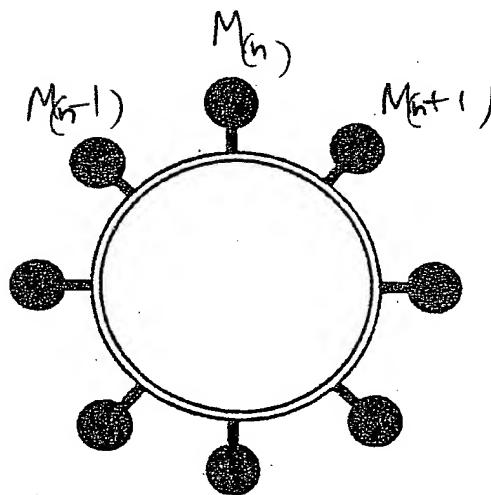
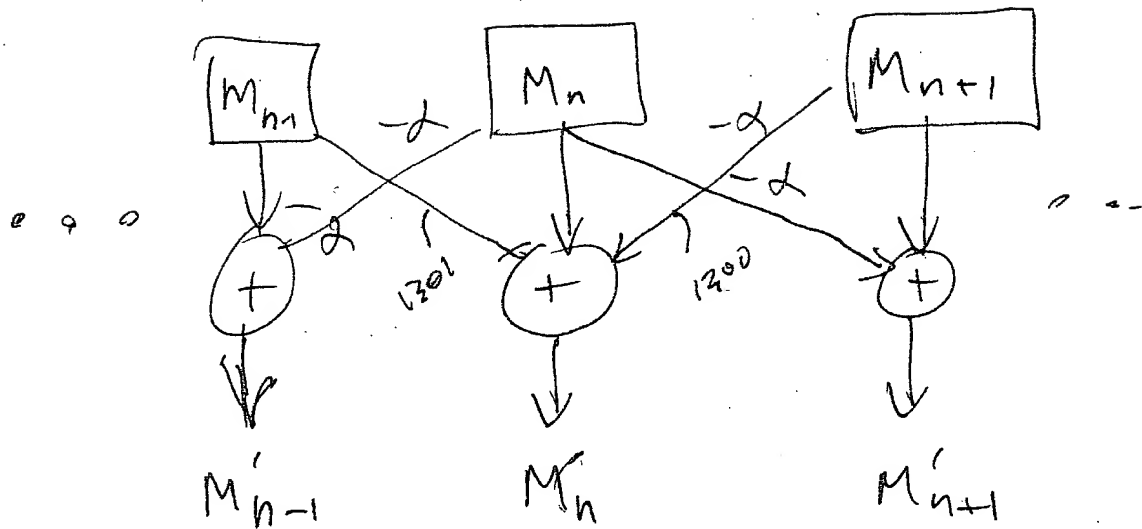
Figure 8: Raw input images showing patches





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Figure 10: Panoramic image composition procedure for each frame





$$M'_n = M_n - \alpha M_{n-1} - \alpha M_{n+1}$$

13  
Figure 13: Radial microphone array (top view)

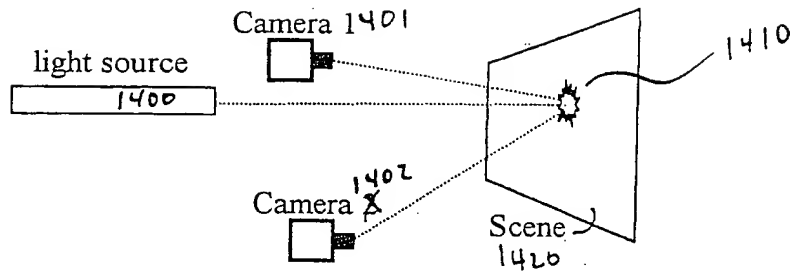


Figure 14: Automatic camera calibration using light source to find registration points

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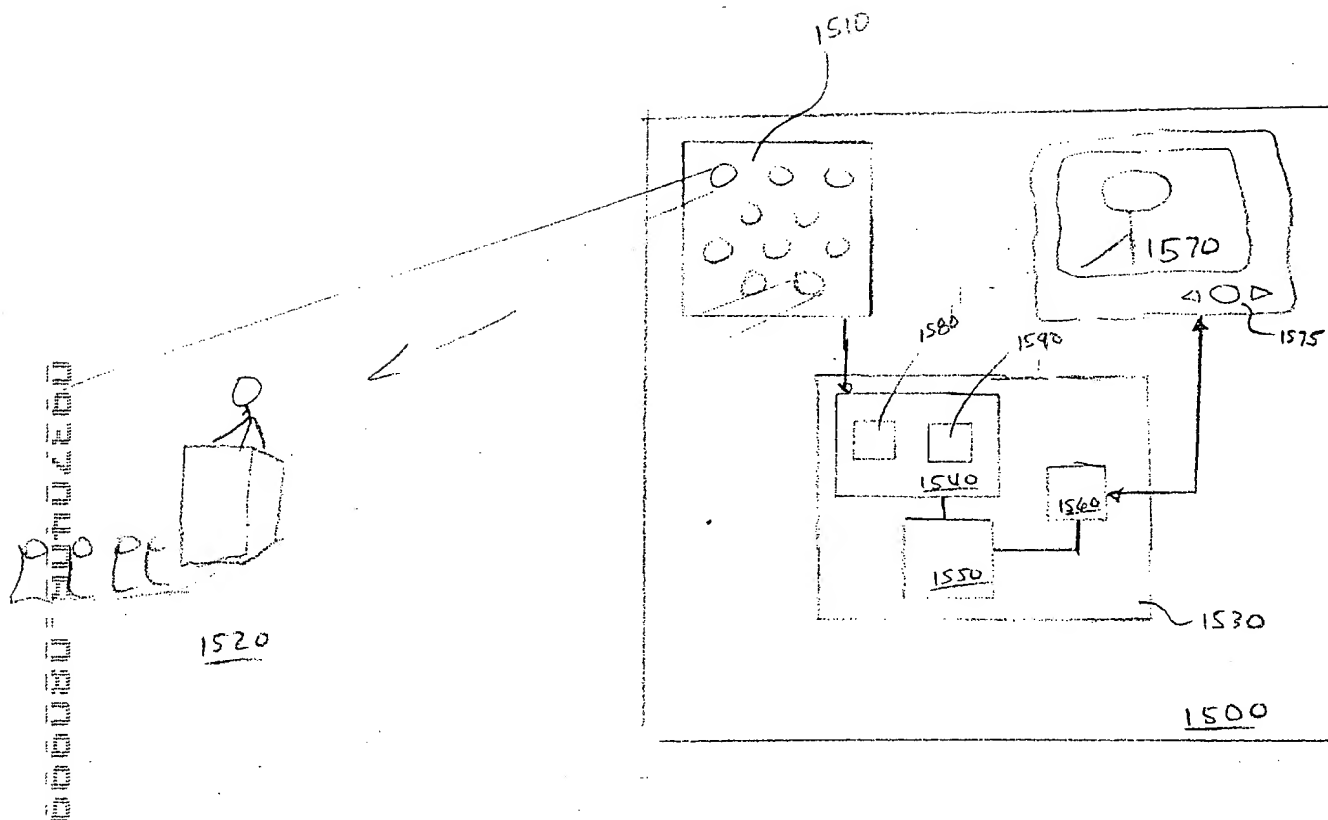


FIG. 15